Winter Track Counts
1977-2003

By Brian Dhuey

Abstract

Winter track count surveys have been conducted in the northern one-third of Wisconsin since the winter of 1977-78. Wildlife managers and researchers document the tracks of bobcat, coyote, fox, fisher, otter, pine marten, and snowshoe hares. The number of tracks per transect decreased for all species except coyote and pine marten in 2002-03.

Methods

Survey transects were set up in 1977 in a block of counties covering the northern one-third of the state. The southern boundary of this block is formed by and includes Burnett, Washburn, Rusk, Taylor, Lincoln, Langlade, and Oconto counties. A group of counties comprising the central forest were add to the survey in 1998. Two geographic areas were chosen in each county, being at least 10 miles apart and 10 miles long, having good habitat of mixed aspen, alder, and conifers. Generally, large areas of unbroken pine and hardwoods were avoided. Roads that were least likely to be plowed following a storm and with minimal traffic were chosen for transects.

Track count surveys are run once a year on each transect during the early snow period (November - December), before roads become impassable and furbearer movement is restricted (snow depth up to 10-12 inches). Track counts are made on the first day after the conclusion (ending before 6:00 p.m.) of a snowfall, allowing one night for track registry.

Following a snowfall, a driver and qualified observer drive along a selected transect at 8-10 miles per hour looking for tracks in front of and along side of the vehicle. Observers record the number of bobcat, coyote, fox, otter, fisher, and pine marten tracks seen along each one-half mile transect section. If it is obvious that an animal has run along the road, its tracks are only counted once. Snowshoe hare tracks are not counted but are recorded as present or absent in the first one-tenth mile segment of each one-half mile transect section. Data are collected by the Northern Wildlife Research Unit, entered into the DNR UNIX computer, and summarized using the Statistical Analysis System (SAS).

Results

During the winter of 2002-03, 27 transects (27 in the north and 0 in the south) were run. This brings the total number of transects surveyed since 1977 to 769. Trends in percent presence (number of transects in which tracks of a species occurred) and the number of tracks per transect are shown in Table 1 and Figure 1.

Data for the snowshoe hare reflects the number of one-half mile transect sections containing hare tracks (Table 1, Figure 1). Data on pine martens have been formally collected since the winter of 1989-90.

For a second year in a row, snow conditions for running the survey were very difficult to attain. Above average temperatures and lack of snowfall caused some routes in the north not to be run. Conditions in the southern region were never such that routes could be run and no surveys

were run in 2002-03. This is the second year in which no routes were run in the southern region.

Ten track count transects were added to the southern zone (Figure 2) in the winter of 1998-99. These transects were added in an attempt to monitor our expanding furbearer population. Snow conditions needed to run transects are more difficult attain in this part of the state. Any results from this portion of the state should be viewed cautiously.

Table 1. *Northern Region, number of tracks observed per transect 1977-2003. The number of transects run in a year is in parenthesis*.

Year	Bobcat	Coyote	Fisher	Fox	Pine Marten	Otter	Snowshoe Hares*
1977-78 (28)	0.21	5.88	1.00	0.70	--	0.23	9.52
1978-79 (32)	0.16	3.61	0.59	0.34	--	0.56	7.50
1979-80 (35)	0.49	6.49	1.14	0.37	--	0.27	7.46
1980-81 (34)	0.50	7.38	1.43	1.10	--	0.19	6.29
1981-82 (24)	0.21	5.29	1.21	0.81	--	0.33	3.50
1982-83 (25)	0.32	5.66	1.44	1.10	--	0.26	1.90
1983-84 (20)	0.10	3.05	1.67	0.45	--	0.60	0.55
1984-85 (33)	0.35	5.88	2.09	0.83	--	0.36	1.29
1985-86 (21)	0.10	0.76	1.57	0.05	--	0.21	2.10
1986-87 (34)	0.41	4.00	1.75	0.84	--	0.24	1.88
1987-88 (29)	0.36	7.31	2.31	1.10	--	0.74	3.17
1988-89 (30)	0.25	6.35	2.13	1.90	--	0.50	3.83
1989-90 (36)	0.42	7.39	2.47	2.64	0.01	0.49	5.78
1990-91 (34)	0.19	4.71	2.60	1.60	0.06	0.24	4.06
1991-92 (29)	0.10	3.61	3.63	1.76	0.24	0.55	4.83
1992-93 (31)	0.26	4.09	4.87	2.23	0.13	0.40	3.88
1993-94 (35)	0.24	5.97	6.61	2.16	0.26	0.29	3.79
1994-95 (32)	0.28	4.13	6.30	2.09	0.00	0.56	3.64
1995-96 (32)	0.25	2.06	3.86	1.73	0.13	0.36	3.48
1996-97 (28)	0.43	2.09	5.27	1.71	0.11	0.48	3.20
1997-98 (27)	0.43	2.48	2.67	1.65	0.00	0.35	2.81
1998-99 (22)	0.32	4.50	5.86	2.41	0.14	0.32	6.73
1999-2000 (37)	1.05	2.92	4.45	2.68	0.08	0.59	4.03
2000-01 (26)	0.65	2.27	4.58	2.12	0.12	0.38	4.08
2001-02 (21)	0.95	4.38	6.00	5.24	0.05	0.71	5.49
2002-03 (27)	0.78	6.41	5.19	3.67	0.41	0.30	1.85

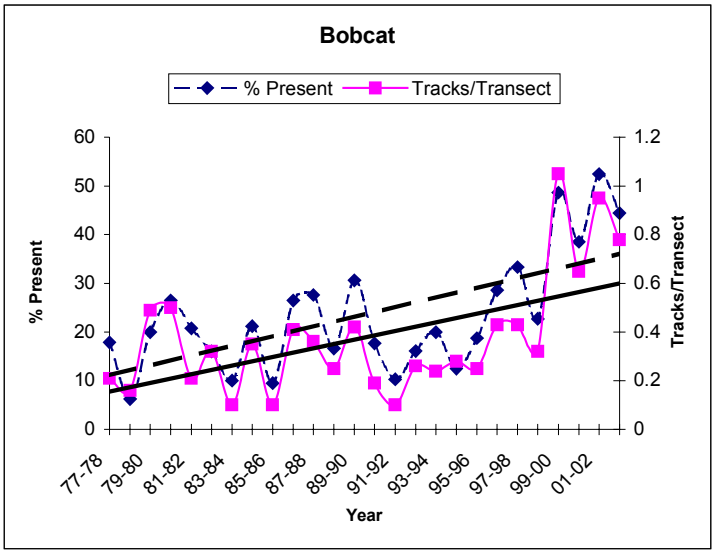
* Snowshoe hare tracks were not counted; this column represents the number of one-half mile transect sections containing snowshoe hare tracks.

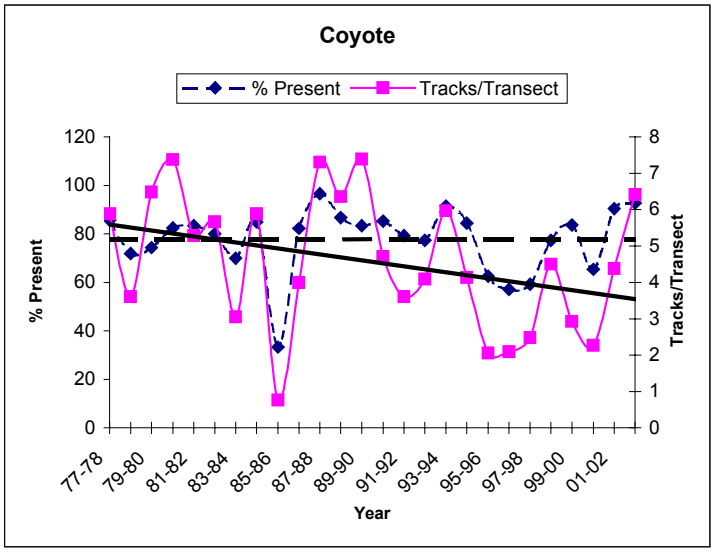
Table 2. *Southern Region, number of tracks observed per transect 1998-2003. The number of transects run in a year is in parenthesis*.

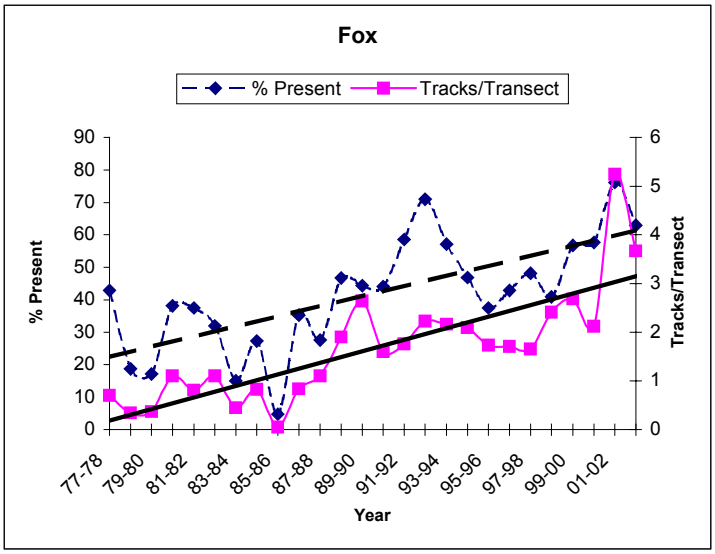
Year[1]	Bobcat	Coyote	Fisher	Fox	Pine Marten	Otter	Snowshoe Hares*
1998-99 (3)	0.0	2.67	0.0	0.33	0.0	0.0	0.0
1999-2000 (4)	0.0	4.25	1.5	3.0	0.0	0.50	1.75
2000-01 (3)	0.0	2.67	3.0	0.33	0.0	0.67	3.67
2001-02 (0)	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2002-03 (0)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

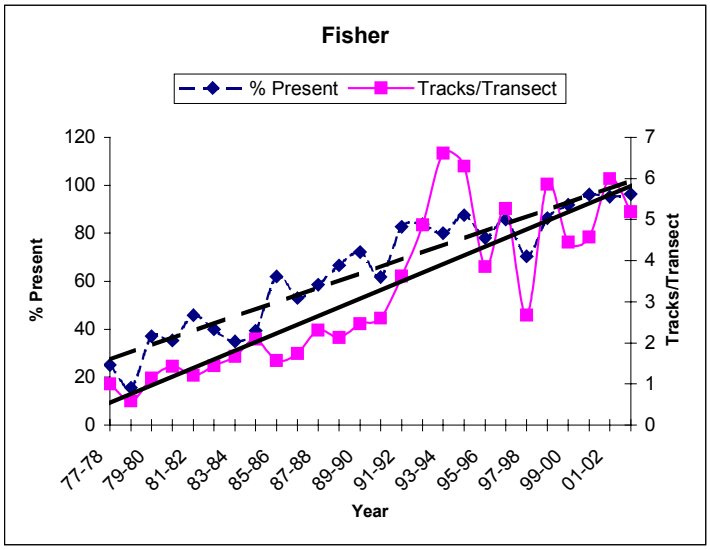
* Snowshoe hare tracks were not counted; this column represents the number of one-half mile transect sections containing snowshoe hare tracks.

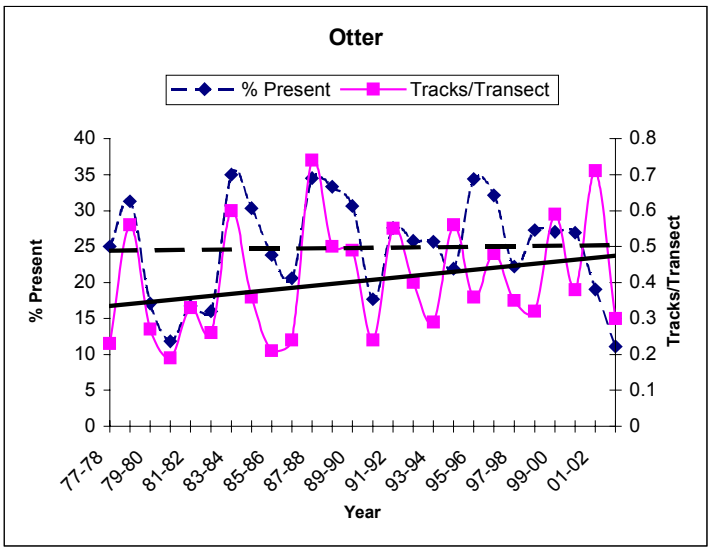
[1]Snow conditions in the southern region make it difficult to run track transects. Ten transects were established in the southern region in 1998-99 but not all have been able to be run.











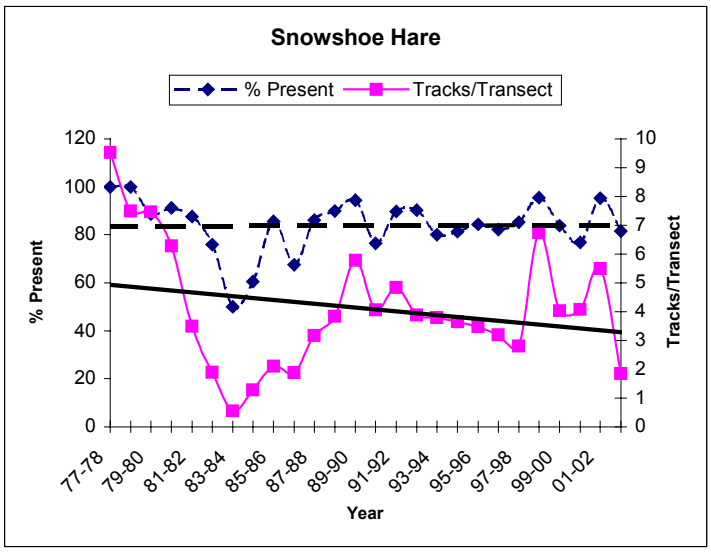


Figure 1. *Winter track count trends for each species surveyed, 1977-2003.*

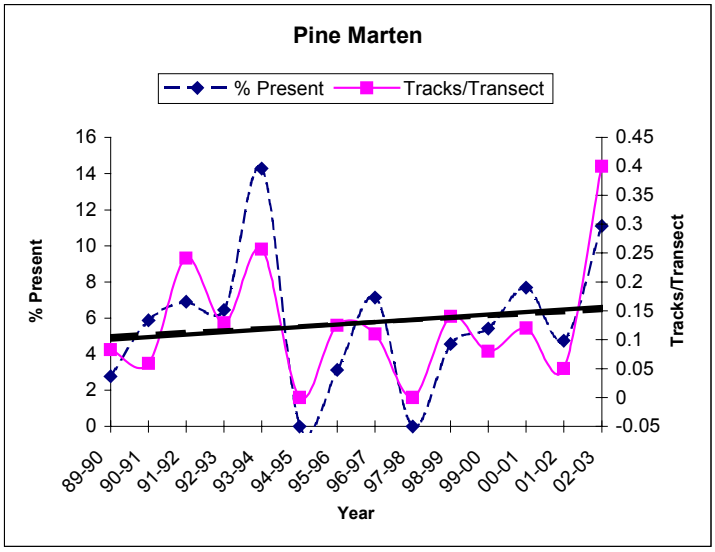


Figure 1. *Continued.*

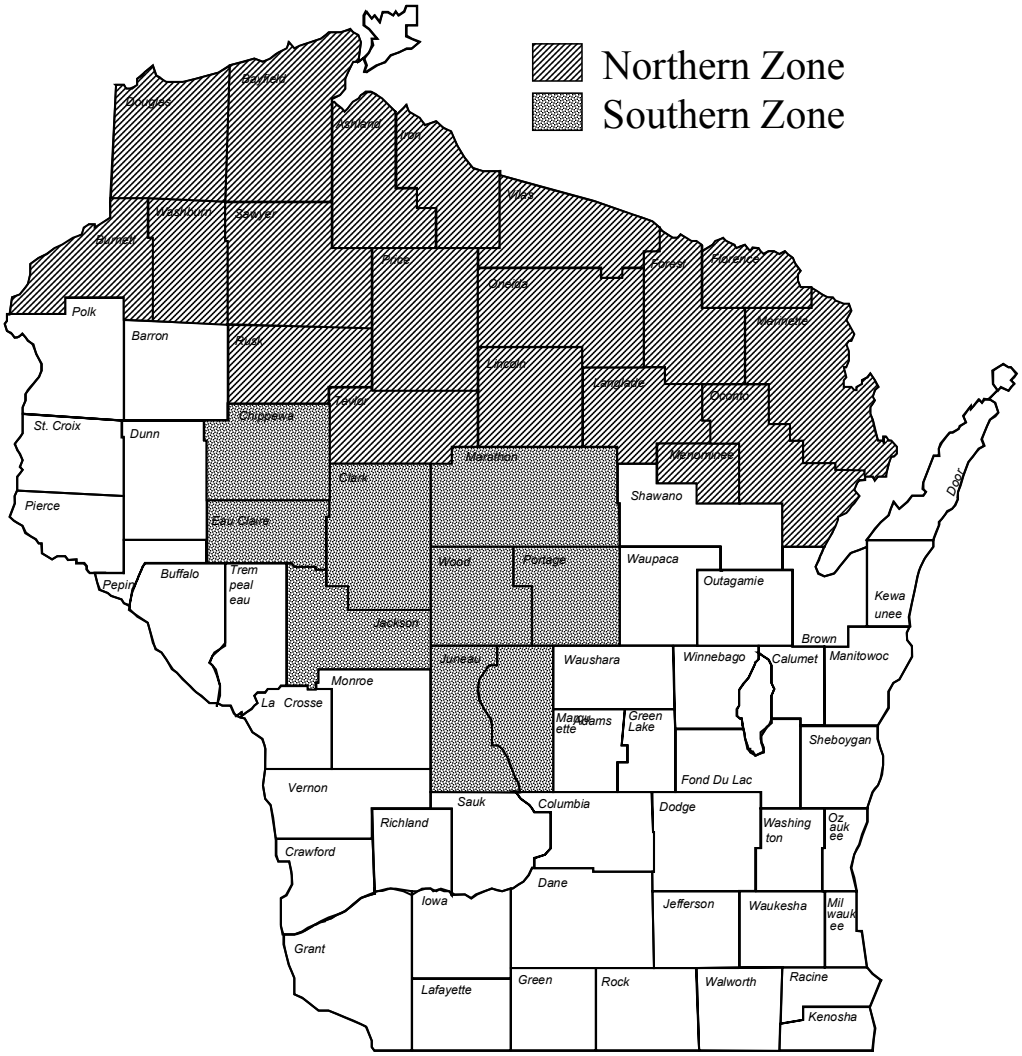


Figure 2. *Shaded counties contain track count surveys.*